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**Restoration of water quality through microorganism consortium**

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We are living in a scenario where development is necessary in every part of the sector. Due to increased industrialization and agricultural practices there is rapid reduction in the quality of water. These practices produce large amount of organic waste which not only reduced the quality of water but also causes disease. The compounds like ammonium chloride, lindane and DDT deplete the dissolved oxygen content and increase toxicity of water. Due to this marine life is affected. Hence removal of ammonium chloride ( $\text{NH}_4^+$ )( $\text{Cl}^-$ ), lindane and DDT is necessary before pouring industrial effluent into water bodies. These treatments can be carried out by using microbial consortium. Consortium contains mixed culture of the bacteria which increase its capacity of degradation by showing commensalism relationship as waste from one organism becomes the source of energy for the other organism. Bioremediation is an eco friendly, cost effective and safe technique which improves quality of water, maintains stability in aquaculture, degrades toxic and organic compounds to carbon dioxide or less toxic material.

Keywords: Bioremediation, microbial consortium, nitrification and denitrification.